



Track System Alerts from Application to Operator Response

Members of the Object Management Group® (OMG®), an international, open membership, not-for-profit technology standards consortium, have produced a modular, adaptive, powerful and complementary standard, which defines an application's ability to issue and monitor system alerts and feed them to operators for situational awareness and response leading to adjustment of systems for the identified problems. ALMAS has direct relevance to Army/Navy/Airforce/Security/Space Management Systems. This data sheet describes ALMAS: ALert Management Service™.

The ALMAS standard provides a complete Platform Independent Model (PIM) to support the interface between components that detect alert conditions and components that manage the status of such conditions (e.g. by informing an operator). The PIM comprises three services and a data model.

• **ALMAS Management:** Components of the ALMAS system responsible for alert lifecycle oversight, distribution (to operators or to applications) for processing.

Management describes the classes responsible for raising, routing, maintaining the state of, and destroying alerts through their lifecycle. ALMAS uses a collection of specialized component interfaces for maintaining state, data, and lifecycle of alerts. In general, systems that utilize ALMAS will interact during runtime primarily through the ALMAS Producer, Responder, and Notification Listener classes. The ALMAS Manager interface is intended for system startup. In more detail:

- Any alert is removed when cancelled. Note that Situation alerts are only removed when cancelled.
- Information and Warning alerts are removed when the required number of acknowledgements (as identified in the Alert Data Acknowledgement Model attribute) are given or (if a timeout is defined) when the timeout is expired.

- **ALMAS Client Callbacks:** The interface to be implemented by system components that wish to be notified of ALMAS events such as alerts created, deleted, etc. ALMAS Client Callbacks are the interfaces to be implemented by system components.

- The first interface set is for clients that issue alerts to the system and wish to monitor their issued alert status as it progresses through the alert state diagram. This interface also supports the ability to terminate an existing alert.
- The second set of interfaces allows applications to monitor alerts in the system and provide processing of an alert. This interface design supports applications working in place of an operator responding to an alert.

Next Step

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- **ALMAS Configuration:** The interfaces and structures for setting up ALMAS.

ALMAS design provides an Application Program Interface (API) by which systems can configure ALMAS to tailor its behavior to satisfy the very specific requirements of a system implementation. There are three categories of configuration files that can be used by ALMAS: the receiver hierarchy, templates, and configuration information. These files are identified by either local filename, or a URL. The returned CallStatus object from each of the methods provides an indication of success/failure and any additional relevant rationale describing that status.

In addition, the standard defines three supporting Platform Specific Models: CORBA®, DDS™ and XML™

- **ALMAS Data Model:** The structures and their relationships used in an ALMAS system. This also includes the state model for an alert from initiation until its termination. The classes described in this section provide the definition of the contents of Alerts, Alert Templates, and Receivers for ALMAS. The two primary concepts in this data model are an Alert Template and an Alert. The Alert Template describes the static description of a pre-defined class of alerts, while an Alert contains the specific attributes of a “live” Alert within the ALMAS system. Both utilize the AlertData class to describe many of their field attributes and values such as date/time of issue, priority, textual description (with embedded specifics).

About OMG

The Object Management Group® (OMG®) is an international, open membership, not-for-profit computer industry standards consortium with representation from government, industry and academia. OMG Task Forces develop enterprise integration standards for a wide range of technologies and an even wider range of industries. OMG modeling standards enable powerful visual design, execution and maintenance of software and other processes. Visit **www.omg.org** for more information.



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